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January 4, 1994

Office of the Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

JAN 05 1994

MAIL ROOM

Dear Mr. Secretary:

Please find enclosed an original and four copies of our Petition for Rule Making and a Request for an Immediate Waiver.

Sincerely

A handwritten signature in cursive script, appearing to read 'John Woods'.

John Woods

President

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MAILED 10 11 1974
Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of

Amendment of Part 15 of the Rules)
with regard to the operation of) RM- _____
spread spectrum transmitters)
with directional antennas)

To: The Commission

PETITION FOR RULE MAKING

Pursuant to Section 1.401 of the Commission's Rules,
Western Multiplex Corporation (WMC) hereby submits this
Petition for Rule Making (Petition) to amend the second
sentence of Section 15.247(b) of the Commission's Rules as
follows:

Original Wording: "If transmitting antennas of directional
gain greater than 6 dBi are used, the power shall be reduced
by the amount in dB that the directional gain of the antenna
exceeds 6 dBi."

Proposed Wording: "If transmitting antennas of directional
gain greater than 6 dBi are used with equipment operating in
the frequency band 902-928 MHz, the power shall be reduced by
the amount in dB that the directional gain of the antenna
exceeds 6 dBi."

I. Introduction

On June 14, 1990, the Commission amended Parts 2 and 15 of its rules to: facilitate greater flexibility in the design and use of non-licensed spread spectrum systems, significantly increase the potential range of permissible designs and to broaden the opportunities for development and use of this important new technology. As the result of the rulemaking, industry is manufacturing products to meet a wide variety of public convenience and safety needs. A significant new public requirement is for outdoor non-licensed spread spectrum point-to-point communication systems operating in the 2400-2483.5 MHz and 5725-5850 MHz bands. These systems use directional antennas and transmitter output powers of up to 1 Watt. The public need for these important types of systems were unknown and therefore not considered by industry or the Commission in the proceedings of Docket No. 89-354, adopted on June 14, 1990.

II. Directional Antennas

Communication systems for narrow band point-to-multipoint applications have typically used frequencies below 1 GHz, due to the less stringent line-of-sight propagation requirements, lower propagation loss and narrow available bandwidths.

Communication systems for broadband point-to-point applications have typically used frequencies above 2 GHz, due to the line of sight propagation characteristics, wide available bandwidths and the ability to build and install cost effective directional antennas. The use of directional antennas means that in a given area frequencies can be reused to yield a significantly higher transmission capacity per unit bandwidth than can be achieved with non-directional antennas.

For these reasons WMC believes that in the frequency bands 2400-2483.5 MHz and 5725-5850 MHz systems that use directional antennas should not be penalized with a transmitter power requirement lower than the transmitter power allowed for less spectrum efficient systems using omnidirectional antennas.

III. Demonstrated Public Need

WMC is a manufacturer of point-to-point spread spectrum microwave radios in the frequency bands 2400-2483.5 MHz and 5725-5850 MHz under rule section 15.247 and the transition provisions of rule section 15.37. The transition provisions permit the use of antennas having directional gains greater than 6 dBi without reducing the transmitter power below the allowed 1W maximum. A widespread public need for these systems is **clearly** demonstrated by the sale and use of these products throughout the United States. Users include: manufacturing and service companies, oil and gas pipeline companies, power utility companies, railroads, cellular radio companies, mobile and SMR operators, common carriers, public safety, state and local governments and the federal government.

IV. In the Public Interest

WMC believes that this Petition is in the public interest for the following reasons:

1. The requirement that the transmitter power for systems operating in the 2400-2483.5 MHz and 5725-5850 MHz bands be reduced by an amount in dB that the directional gain of the antenna exceeds 6 dBi would damage the public interest by severely limiting the effective operation of systems manufactured for outdoor applications.
2. After June 22, 1994, members of the public who had been able to obtain equipment under the transition rules of section 15.37, will be forced to seek the use of alternative, licensed, equipment. This will add congestion to the licensed spectrum and tax the FCC's already limited resources.
3. The public would benefit from being able to continue to obtain non-licensed products that can be swiftly installed in a wide variety of point-to-point applications. Elimination of these products would needlessly subject the public to the delay and significant expense of frequency coordination required with the use of licensed equipment.

4. Industry will be able to respond to the needs of the market with a wider variety of emerging technology products and capabilities.
5. The granting of this petition will enhance the FCC's goal of significantly increasing the potential range of permissible designs for Part 15 spread spectrum systems and broadening the opportunities for the development and use of this important new technology.
6. If the petition is not granted, products that are clearly being used to meet a wide variety of public convenience and safety needs will be forced off the market.
7. If the petition is not granted, successful U.S. businesses will be harmed during economically challenging times.

V. No Known Case of Harmful Interference


Equipment using directional antennas without the 6 dBW EIRP restriction now operates throughout the United States. There are no cases of harmful interference in either the 2400-2483.5 MHz or 5725-5850 MHz bands known to WMC.

WHEREFORE, THE PREMISES CONSIDERED, Western Multiplex Corporation respectfully requests the Commission to initiate a rulemaking proceeding consistent with the views expressed herein.

Respectfully submitted,

WESTERN MULTIPLEX CORPORATION

By:



John Woods
President

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January 4, 1994